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Commercial Feedlots and Veterinary Medicine in the Imperial Valley of California

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This past summer it was my pleasure to be employed by James R. Howard (ISU '54) D.V.M., Ph.D., veterinary pathologist, of the Imperial Valley of California. Dr. Howard has established an almost 100 percent feedlot practice. I present this paper to help inform veterinarians of how cattle are handled in this particular commercial feedlot practice in hopes that some ideas can be transferred to other feedlot setups.

Dr. Howard provides consultation and research on a contract basis. He now has 60,000 head of cattle under his care. He is given charge of the health programs of the feedlot companies, extends advice to the over-all care of the cattle and performs well needed, practical research to better classify the disease conditions as they are seen in these lots.

To be more specific as to his day to day work, he performs autopsies on all cattle that die and keeps a running record of the diagnoses and the cowboy in charge. The pen of calves that the dead steer came from is then examined, and any recommendations as to management changes or therapy initiation are made. Dr. Howard has his own bacterial isolation and identification equipment, histopathology preparation and examination equipment, and other various diagnostic aids such as a spectrophotometer and hematology equipment. He uses these facilities to better classify the disease processes in these feedlots.

He does very little treating himself except to administer blood transfusions. The cowboys who are employees of the feedlot companies and who are responsible for a certain number of pens of cattle do almost all of the day to day treatment. Dr. Howard is alerted by the cowboys to any cases that do not respond to the usual treatment regime. Most all sickness problems are

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handled by the cowboys with a standard treatment. Specific cases such as leptospirosis and bacillary hemoglobinuria are followed up personally by Dr. Howard. All medicines are purchased through a local drug outlet by the companies. Dr. Howard does not handle drugs to any extent because it is uneconomical to compete with these outlets and their high volume, reduced price sales.

Prefeeding Preparation

Prefeeding preparation of cattle is handled differently in many respects in the Imperial Valley from that in the Midwest. The cattle that are fed in these lots have wide and varied origins and breeding. Calves weighing about 350–400 pounds come from Texas and Oklahoma primarily and some from Florida, Louisiana, and old Mexico. The calves are purchased inividually at sale barns and retined there until a truck load is assembled. They are then trucked to the feedlots in the Imperial Valley. Soon after unloading, the cattle are processed. This includes deworming, dipping, dehorning, implanting of growth stimulants, branding, castrating and injecting a vitamin ADE product and infectious bovine rhinotracheitis vaccine. Some lots vaccinate for leptospirosis and for the bovine virus diarrhea-mucosal disease complex (BVD-MD) at this time. The vaccination for these two diseases is not a widespread practice, however. No medication is added to the feed or water. All of this prefeeding preparation is done by lay help.

Feeding

The calves upon introduction to the feedlot are fed their fill of hay and clean water on the first day. Starting on the second day they are given mill feed (ground feed) on top of the roughage. On successive days the amount of roughage is decreased and the mill feed increased. Three or four basic rations are fed throughout the growing and fattening period. The concentrate percentage increases and the roughage percentage decreases as the calves grow and fatten. Some of the comodities used in this area are alfalfa, cotton hulls, orange peels, beet pulp, hominy, bakery or ground bread products, wheat, milo, fat, molasses, and minerals. Growth hormones are added to the feed also. Some of these ingredients are not well known to the Midwest cattle feeder but are widely used in the Imperial Valley because of their availability and reasonably lower cost. These feedlots are looking for the cheapest gain possible and will buy in volume to decrease their costs.

Principal Health Problems

The principle health problems as seen in the Imperial Valley are numerous and varied. The half-a-million fat steers that leave the Imperial Valley for market each year provides a large nidus for any of a number of disease conditions to grow on. The primary cause of death throughout the feedlots is pneumonia. This being primary as in shipping fever or secondary as in the various virus infections. About 25% of all the cattle that enter the lots come down with the various degrees of shipping fever. These cattle are all treated the same regardless of the condition. The standard treatment includes either penicillin-dihydrostreptomycin or oxytetracyclines HC or a combination of the two. Thirty cc. of either drug or 20 cc. of each drug in combination is used. This same amount is administered each day by the cowboys if the animal still appears sick. This therapy is continued about five days if no real improvement is noticed. If at the end of that five days there is no improvement or relapse, the treatments are discontinued and the animal observed for a couple days. If relapse occurs, the therapy is reinstituted. All cattle under daily treatment are returned to their same pens. The opinion is that the change of the environment of the hospital pen and the introduction of different feed will add just that much more stress to their condition. The pens are so contaminated with the diseases known to that area that isolation is fruitless.

The next most common condition is associated with castration. Most of the

calves are castrated by cutting in the Imperial Valley. Because lay personnel are used to castrate these calves, hemorrhage and infection are common sequelae. The infections are treated in the same manner as the shipping fevers. Some infections require opening and flushing as subsequent treatment. The other problem of postcastration is hemorrhage. Blood transfusions are widely instituted by Dr. Howard for this condition using the vast number of cattle available as his blood source. Transfusions are also used in leptospirosis cases.

A number of other conditions are commonplace in the lots both at physical examination and at autopsy. These include leptospirosis as mentioned before, infectious bovine rhinotracheitis, bovine virus diarrhea-mucosal disease complex, coccidiosis, anaplasmosis, and fluke-initiated bacillary hemoglobinuria. The organisms causing these diseases are readily available becuse of the contaminated pens and the multitude of cattle of different origin and background. Few encephalitic diseases are diagnosed especially during the summer. This is consistent with encephalitides usually being cold weather diseases. The ambient temperature of the Imperial Valley during the summer months often reaches 120° F. The exception is coccidial encephalopathy which is a very common disease process there.

Conclusion

Commercial feedlot practice is just another example of the expanding opportunities opening for veterinarians. It has some new problems and some of the same old problems. Disease processes and handling of cattle are often different. This new aspect of veterinary medicine is just beginning, and the future looks very promising and profitable.

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Answers to Small Animal Review

1. 85%–90% of all pups have lost their maternal antibody titer by the time they reach nine weeks of age. By fourteen weeks of age, at least 95% of all pups have lost their antibody titer.
2. Feline infectious peritonitis.
3. Hypertrophic pulmonary osteoarthropathy.
4. In the cervical area, resulting pressure from a disc syndrome affects the ventral spinal nerves, therefore, giving subsequent pain rather than paralysis. In the thoraco-lumbar area, the involved discs put pressure on the spinal cord, resulting in paralysis.
5. The three conditions are: 1) Avascular necrosis of femoral head; 2) Avascular necrosis of tibial crest; 3) Osteochondritis dissecans. Corticosteroids would reduce the blood supply to these areas, and, therefore, would reduce healing. Also, steroids would reduce pain sensations from these areas, therefore, the dog would be more apt to aggravate the condition by over-exercising the affected parts, instead of resting it as is recommended.
6. Granulamatous colitis.
7. a. Corneal ulcer
   b. Superficial punctate keratitis
   c. Entropion
   d. Glaucoma
   e. Retinal ectasia
   f. Distichiasis
8. Persistent patency of the ductus arteriosus.
9. Pancreatic islet cell tumor.
10. Heat prostration.